BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,062	07/30/2001	Donald J. Schremp	10004377-1	2666

7590 07/02/2003

AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER
PADMANABHAN, KARTIC

ART UNIT	PAPER NUMBER
1641	

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/919,062	SCHREMP ET AL.	
	Examiner	Art Unit	
	Kartic Padmanabhan	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-70* is/are pending in the application.

4a) Of the above claim(s) *26-70* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-70* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *7/30/01* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. This application contains claims 26-70 drawn to an invention nonelected with traverse in Paper No. 4. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Earley et al. (WO 94/08759 A1). The reference teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. The reference also teaches the use of lids with the microtiter plate. Further, the microtiter plate is used to perform DNA sequencing reactions. As such, sample with DNA is loaded into the wells of the plate, such that the bottom surface of the well (support) will comprise or contact DNA molecules. However, the reference does not teach the specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Earley et al. to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been

obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

7. Claims 1-23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pedley (GB 2 197 720 A). The reference teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. In addition, the reference teaches the immobilization of polynucleotides to the wells of the plate (abstract). However, the reference does not teach the specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Pedley to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

8. Claims 1-23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balch (US Pat. 6,083,763). The reference teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a

housing, a support, wells with sloped walls, and a ledge. In addition, the reference teaches that the plate may comprise DNA probes. However, the reference does not teach the specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Balch to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

9. Claims 1-19 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniel (US Pat. 4,919,894). The reference teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. In addition, the reference teaches a cover that sits over the microtiter plate to reduce cross-infection between samples and infection from the air. However, the reference does not teach the specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Daniel to the specific lengths, widths,

and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

10. Claims 1-19, 22-23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matkovich et al. (US Pat. 4,828,386). The reference teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. According to the reference, membrane inserts can fit within the wells of the microtiter plate or can extend above the well walls. The inserts are removable from the plate. The inserts can be used with standard microtiter plates or the plate can be adapted for specific use with the inserts. However, the reference does not teach the specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Matkovich et al. to the specific lengths, widths, and angle sizes required by the present claims. One would have been motivated to do so because Matkovich et al. teach that a microtiter plate may be adapted for specific purposes. In addition, it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally

recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

11. Claims 1-19, 22-23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calenoff et al. (US Pat. 4,844,966). The reference teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. The reference also teaches well inserts. However, the reference does not teach the specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Calenoff et al. to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

12. Claims 1-19, 22-23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Provonchee (US Pat. 4,701,754). The reference teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims

drawn to a device with a housing, a support, wells with sloped walls, and a ledge. The reference also teaches that the wells do not necessarily have to form part of an integral unit, but may be independently removable from a supporting rack. The configuration of the wells in either case is preferably an array of one or more rows. However, the reference does not teach the specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Provonchee to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

13. Claims 1-19 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cassin et al. (US Pat. 5,910,287). The reference teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. In addition, the reference teaches that the wells of the reference may be made in any cross-sectional shape, including square. The walls of the wells may be completely vertical or may be conical. The reference also teaches cycloolefins that may comprise part of a plate cover. However, the reference

does not teach the specific dimensions of the device, such as size (height, length, width, angles).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Cassin et al. to the specific lengths, widths, and angle sizes required by the present claims. It would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Response to Arguments

14. Applicant's arguments filed 4/14/03 have been fully considered but they are not persuasive.

15. In response to applicant's arguments that the Earley, Pedley, Balch, Daniel, Matkovich, Calenoff, Provonchee, and Cassin references fail to disclose every element of the amended claims, the examiner agrees, which has resulted in the withdrawal of all rejections under 35 USC 102, However, applicant's amendments have resulted in the application of the above references under 35 USC 103.

16. Applicant argues that the present invention differs over the cited art in more than just the dimensions of the device. In support of this contention, applicant points out that none of the cited prior art teaches a relationship between the wicking of liquid from a well and the geometry of the well. However, it is noted that this appears to be an arguments regarding the way in which the device is able to function rather that an argument regarding any positive recitation of the limitations of the device itself. However, insofar as this arguments does regard the actual device, it is noted that claim 1 merely recites that the design of the well is such that liquid is not drawn

out of said well, which is an inherent feature of the wells of a standard microtiter well. One does not put liquid in the wells of a microtiter plate with the expectation that the liquid will not remain there; rather, one expects that liquid disposed in the well will stay there. Similarly, although claim 2 recites a design such that wicking is reduced, absent evidence to the contrary, the examiner contends that the design of a conventional microtiter plate well is such that liquid does not wick from the well.

17. Applicant argues that the reference by Matkovich in being able to adapt a microtiter plate for various purposes refers only to well inserts. However, it is noted that a reference is in no way limited to its examples or preferred embodiments, and the statement by Matkovich regarding the adaptability of microtiter plates for various purposes is seen as a basis for allowing one of ordinary skill it the art to so modify, depending on their intention for using the plate.

18. Applicant argues that the present invention has various advantages over the prior art and produces unexpected results with regards to elimination or reduction of wicking. To merit weight, applicant should consider filing a declaration outlining the advantages and unexpected results of the present invention over the prior art.

19. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

20. Applicant argues that the holding in *In re Rose* regarding changes in size is not applicable since the present invention involves more than just a change in size. This is not persuasive. In support of this conclusion, applicant has relied on the fact that none of the references teach elimination of wicking; however, the examiner maintains that such an explicit disclosure is not necessary as conventional microtiter plates, absent evidence to the contrary, are interpreted as inherently possessing this feature for reasons discussed above, which reduces the difference in applicant's invention over the prior art to a mere change in size of the components.

Conclusion

Claims 1-25 are rejected.

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kartic Padmanabhan whose telephone number is 703-305-0509. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 703-305-3399. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-5207 for regular communications and 703-305-3014 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Kartic Padmanabhan
Patent Examiner
Art Unit 1641

*** KP

June 29, 2003

LONG V. LE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

06/29/03